

### REMARKS/ARGUMENTS

Favorable reconsideration of this application in light of the following discussion is respectfully requested. Claims 1-10, 12-17, 19-26 and 28-33 remain pending in the present application. Claims 1, 10, 17, 24-26, and 33 are amended, support for which is found at least at Figure 1. Claims 1, 6-8, 13, 15, 20, 22, 24, 25, 29 and 31 have been amended to address cosmetic matters of form. No new matter has been added.

By way of summary, the Official Action presents the following issues: Claims 1, 24 and 25 stand objected to as to matters of form. Claims 6-9, 13-16, 20-23, and 25-32 stand rejected under 35 U.S.C. § 112, second paragraph; Claims 1 and 4 stand rejected under 35 U.S.C. § 103 as being unpatentable over Nagayasu (U.S. Patent Publication 2002/0136334, hereinafter Nagayasu); Walton et al. (U.S. Patent Publication 2003/0035491, hereinafter Walton), Subramanian et al. (U.S. Patent Publication 2001/0031014, hereinafter Subramanian), Norman (U.S. Patent 6,023,492, hereinafter Norman in further view of El-Gamal et al. (U.S. Patent Publication 2001/0034868, hereinafter El-Gamal); Claims 2 and 3 stand rejected under 35 U.S.C. § 103 as being unpatentable over Nagayasu, Walton, Subramanian, Norman, El-Gamal and in further view of Laroia et al. (U.S. Patent 6,473,418, hereinafter Laroia); Claim 5 stands rejected under 35 U.S.C. § 103 as being unpatentable over Nagayasu, Walton, Subramanian, Norman, and El-Gamal and in further view of Das et al. (U.S. Patent Publication 2003/0076,783, hereinafter Das); Claims 10, 17, and 26 stand rejected under 35 U.S.C. § 103 as being unpatentable over Subramanian, Norman, and in further view of El Gamal; Claims 24, 25, and 33 stand rejected under 35 U.S.C. § 103 as being unpatentable over Nagayasu and Walton; Claims 12, 19 and 28 stand rejected under 35 U.S.C. § 103 as being unpatentable over Subramanian, Norman, El-Gamal and in further view of Das.

### CLAIM OBJECTIONS

The Official Action has objected to Claims 1, 24 and 25 as lacking antecedent basis for claimed terminology as outlined at page 2 of the Official Action. As Applicants have amended the claims to account for these issues, Applicants respectfully request that the objection to the claims be withdrawn.

Accordingly, Applicants respectfully request that the rejection of Claims 6-9, 13-16, 20-23 and 29-32 under 35 U.S.C. § 112, second paragraph, be withdrawn.

### REJECTIONS UNDER 35 U.S.C. § 112

The Official Action has rejected Claims 6-9, 13-16, 20-23 and 29-32 under 35 U.S.C. § 112, second paragraph.

In response, Applicants have amended the above-identified claims to provide a definition for “considerable interference signals” and to remove the language “relatively high level” and substitute therefor “exceeds a threshold level”.

### REJECTIONS UNDER 35 U.S.C. § 103

The Official Action has rejected Claims 1 and 4 under 35 U.S.C. § 103 as being unpatentable over Nagayasu, Walton, Subramanian, Norman and in further view of El-Gamal. The Official Action contends that when taken together, these five references teach all of the features of the Applicants’ claims. Applicants respectfully traverse the rejection.

Applicants amended Claim 1 recites, *inter alia*, the communication system including:

a transmitting station side including at last two sending stations each corresponding to a respective user, and employing a different interleave method configured to transmit a transmission signal obtained by segmenting transmission information into a plurality of frames, encoding each frame, power amplifying each encoded signal with a different amplitude, and interleaving all signals with each amplified signal collected into one channel; . . .

Walton is identified in the Official Action at page 4 as corresponding to the Applicants' claimed de-interleaving methodology. For example, the Official Action cites the antennas 124a-124t as employing a different interleave method.<sup>1</sup> Moreover, the Official Action notes that as the interleave may be based upon CSI (channel state information) and that this adjustment of channel interleave methodology is broadly considered as a different interleave method as claimed.

Applicants note that Walton describes a MIMO transmitter system. For example, as shown in Figure 2, this system provides separate channel processing systems (210a-n) each including an encoder (212), a channel interleaver (214) and symbol mapping section (216). Based upon processed pilot data, transmission qualities may be adapted at the transmitter side for performing channel estimation.<sup>2</sup> Applicants note that amended Claim 1 recites that a transmitting station side includes at least two sending stations each corresponding to a respective user. Walton describes a single transmitter including distinct channel processing sections. Moreover, Applicants note that the amended claims recite that the transmission signals of each of the at least two sending stations is collected into one channel for transmission. As Walton describes providing data via a plurality of channels, Walton does not disclose or suggest this additional feature.

As none of the other four references identified in this rejection under 35 U.S.C. § 103 disclose or suggest the above-identified features, Applicants respectfully submit that none of these references either alone or in combination remedy the deficiencies discussed above to provide a *prima facie* case of obviousness.

Accordingly, Applicants respectfully request that the rejection of Claims 1 and 4 under 35 U.S.C. § 103 be withdrawn.

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<sup>1</sup> Paragraphs [0039]-[0041] of Walton are also cited in the Official Action at page 4.

<sup>2</sup> See Walton at paragraphs [0039]-[0041].

The Official Action has rejected Claims 2-3 under 35 U.S.C. § 103 as being unpatentable over Nagayasu, Walton, Subramanian, Norman, El-Gamal and in further view of Laroia. The Official Action contends that when taken together, these six references render the Applicants' claims obvious. Applicants respectfully traverse the rejection.

As noted above, neither Nagayasu, Walton, Subramanian, Norman, El-Gamal nor Laroia alone or in combination, disclose all of the elements of the Applicants' amended claims. As Laroia does not remedy the deficiencies discussed above, Applicants respectfully submit that a *prima facie* case of obviousness has not been presented. Accordingly, Applicants respectfully request that the rejection of Claims 2 and 3 under 35 U.S.C. § 103 be withdrawn.

The Official Action has rejected Claim 5 35 U.S.C. § 103 as being unpatentable over Nagayasu, Walton, Subramanian, Norman and El-Gamal. The Official Action contends that when taken together, these five references render the Applicants' claims obvious. Applicants respectfully traverse the rejection.

As noted above, neither Nagayasu, Walton, Subramanian, Norman nor El-Gamal alone or in combination, disclose all the elements of the Applicants' amended claims. As such, Applicants respectfully submit that a *prima facie* case of obviousness has not been presented. Accordingly, Applicants respectfully request that the rejection of Claim 5 under 35 U.S.C. §103 be withdrawn.

Applicants' amended Claim 10 recites, *inter alia*, a transmitting apparatus including:

... power amplification means for power amplifying each encoded signal with different amplitude; said power amplification means changes a rate of amplitude amplification for each frame **according to a decoding capability in a receiving station side**; ... (emphasis added)

Applicants note that the Applicants' amended claims require that the power amplification changes a rate of amplitude amplification for each frame according to a decoding capability of a receiving station side. The Official Action provides no discussion of how the scaling functionality of Subramanian is dictated upon **a receiving station side**. Accordingly, Applicants respectfully submit that a *prima facie* case of obviousness has not been presented. Accordingly, Applicants respectfully request that the rejection of Claims 10, 17, and 26 under 35 U.S.C. § 103 be withdrawn.

The Official Action has rejected Claims 24, 25 and 33 under 35 U.S.C. § 103 as being unpatentable over Nagayasu in view of Walton. The Official Action contends that these two references, when taken in combination, render the Applicants' claims obvious. Applicants respectfully traverse the rejection.

As noted above, Nagayasu is deficient with respect to Applicants' claimed at least two sending stations each corresponding to a respective user, and a different interleave method configured to transmit a transmission signal obtained by segmenting transmission information into a plurality of frames, encoding each frame, power amplifying each encoded signal with a different amplitude, and interleaving all signals with each amplified signal collected into one channel. As Walton does not remedy the deficiency discussed above, Applicants respectfully submit that a *prima facie* case of obviousness has not been presented.

Accordingly, Applicants respectfully request that the rejection of Claims 24, 25 and 33 under 35 U.S.C. § 103 be withdrawn.

The Official Action has rejected Claims 12, 19 and 28 under 35 U.S.C. § 103 as being unpatentable over Subramanian, Norman, El-Gamal in further view of Das. The Official Action contends that these four references, when taken together, provide all the features of the Applicants' claims. Applicants respectfully traverse the rejection.

As noted above, neither Subramanian, Norman, El-Gamal nor Das, alone or in combination, disclose all the elements of the Applicants' amended claims. As Claims 12, 19 and 28, by virtue of dependency, include these features, Applicants respectfully submit that a *prima facie* case of obviousness has not been presented. Accordingly, Applicants respectfully request that the rejection of Claims 12, 19 and 28 under 35 U.S.C. §103 be withdrawn.

CONCLUSION

Consequently, in view of the foregoing amendment and remarks, it is respectfully submitted that the present application, including Claims 1-10, 12-17, 19-26 and 28-33 is patentably distinguished over the prior art, definite, in condition for allowance, and such action is respectfully requested at an early date.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.



Bradley D. Lytle  
Attorney of Record  
Registration No.: 40,073

Customer Number  
**22850**

Tel: (703) 413-3000  
Fax: (703) 413 -2220  
(OSMMN 08/07)  
SAM/rac/cmc

Scott A. McKeown  
Registration No. 42,866